Orenstein wins American Physical Society Prize

MSD investigator Joe Orenstein was awarded the 2008 Frank Isakson Prize for Optical Effects in Solids by the American Physical Society for "pioneering contributions to the understanding of optical phenomena in complex materials including conducting polymers, semiconductors, and high temperature superconductors."

The Frank Isakson Prize was established in 1979 to recognize outstanding optical research that leads to breakthroughs in the condensed matter sciences. The prize is awarded biennially in even-numbered years as a memorial to Frank Isakson.

Orenstein is known internationally for his development of optical methods to explore the properties of exotic excitations in novel materials, particularly in "quantum materials" in which electron-electron interactions play a dominant role. He has used a wide variety of time-resolved optical techniques to investigate solitons, polarons, and triplet excitons in conducting polymers, d-wave quasiparticles in high-T_c superconductors, and spin polarization waves in semiconductors. Currently his research focuses on electric field control of electron spin in semiconductors and multiferroic materials.

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